



IBM Tivoli Storage FlashCopy Manager V2.1 delivers application data protection via utilization of advanced IBM storage hardware snapshot technology

Table of contents

1 Overview	7 Publications
2 Key prerequisites	7 Technical information
2 Planned availability date	13 Ordering information
2 Description	19 Terms and conditions
5 Product positioning	22 Prices
6 Program number	22 Order now

At a glance

IBM® Tivoli® Storage FlashCopy® Manager V2.1 delivers:

- Online, near instant snapshot backups with minimal performance impact to:
 - IBM DB2®, Oracle, and SAP databases on the IBM AIX® platform
 - Microsoft® SQL Server and Exchange databases on the Microsoft Windows® platform
- High-performance, near instant restore capability
- Simplified deployment of Tivoli Storage FlashCopy Manager V2.1 application snapshot capabilities with installation, configuration, and execution of initial application snapshot typically in less than four hours (given that the respective application and storage devices have already been installed and are operational)
- Integration with IBM System Storage™ DS8000™, IBM SAN Volume Controller, and IBM XIV Storage System products
- Microsoft Volume Shadow Copy Services (VSS) integration with IBM System Storage DS3000, DS4000™, and DS5000
- Optional integration with IBM Tivoli Storage Manager for advanced data protection and data reduction needs

For ordering, contact your IBM representative or an IBM Business Partner. For more information, contact the Americas Call Centers at 800-IBM-CALL (426-2255).

Reference: YE001

Overview

IBM Tivoli Storage FlashCopy Manager (Tivoli Storage FlashCopy Manager) V2.1 is designed to deliver high levels of data protection for business-critical IBM DB2, SAP, Oracle, Microsoft Exchange, and Microsoft SQL databases via integrated application snapshot backup and restore capabilities. This is achieved through the utilization of advanced IBM storage hardware snapshot technology to help create a high performance, low impact application data protection solution. It is easy to install, configure, and deploy, and seamlessly integrates with IBM System Storage DS8000, IBM SAN Volume Controller, and IBM XIV Storage System products. For Microsoft Windows environments, Storage FlashCopy Manager V2.1 also supports other Microsoft Volume Shadow Copy Services (VSS)-capable hardware such as IBM System Storage DS3000, DS4000, and DS5000.

Optional integration with IBM Tivoli Storage Manager can help you leverage a broad range of advanced data protection and data reduction capabilities such as data deduplication, progressive incremental backup, hierarchical storage management, and centrally managed policy-based administration.

Key prerequisites

Refer to the [Hardware and software requirements](#) section.

Planned availability date

- October 23, 2009: Electronic
- November 13, 2009: Media

Description

In today's business world, where application servers are operational 24 hours a day, the data on these servers must be fully protected. With the rapid increase in the amount of data on these servers, their critical business needs, and the shrinking backup windows, traditional backup and restore methods may be reaching their limits in meeting these challenging requirements. Snapshot operations can help minimize the impact caused by backups and provide near instant restore capabilities. Since a snapshot operation typically takes much less time than the time for a tape backup, the window during which the data is being backed up can be reduced. This helps facilitate more frequent backups and increase the flexibility of backup scheduling and administration because the time spent for forward recovery through transaction logs after a restore is minimized.

In addition, application data availability can be significantly improved due to the reduction of the load on the production servers. The snapshots can be retained as backups on local disk and, with optional integration with IBM Tivoli Storage Manager, sent to Tivoli Storage Manager server storage pools.

Tivoli Storage FlashCopy Manager V2.1 utilizes storage snapshot capabilities to provide high speed, low impact application data backup and restore functionality for the application and storage environments. Automated policy-based management of multiple snapshot backup versions, together with a simple and guided installation and configuration process, provide an easy to use and quick to deploy data protection solution that can help meet the most stringent database recovery time requirements.

Tivoli Storage FlashCopy Manager V2.1 supports clustered application environments (Microsoft Cluster Server and Veritas Cluster Server) on Microsoft Windows and high availability cluster multi-processing (HACMP™) on IBM AIX and Microsoft Exchange 2007 continuous replication configurations {local continuous replication (LCR), cluster continuous replication (CCR), and standby continuous replication (SCR)}.

Online, near instant snapshot backup and restore of critical business application data

Microsoft Exchange protection

- Snapshot restore of Microsoft Exchange storage groups
- File copy restore of a storage group or database from a mounted snapshot image
 - Restore into a recovery storage group, alternate storage group, or relocated storage group
- File copy restore of transaction logs from incremental or differential backups

Microsoft Exchange individual mailbox restore from a snapshot backup

Tivoli Storage FlashCopy Manager V2.1 enables individual mailbox and mail item restores of Microsoft Exchange 2007 servers from a snapshot backup. Specifically, the following granular Microsoft Exchange restore capabilities are provided:

- Single or multiple user mailbox support
- Restore selectable based on user name and date and time specification
- Recovery of the following mailbox items:
 - Inbox, deleted items, and drafts
 - Outbox, sent items, journal, and calendar
 - Contacts, notes, tasks, and user folders
- Limit the scope of items to be restored based on filters such as sender name, subject texts, attachment name, folder name, message delivery date and time range, message body, and all content (searches subject text, message body, and attachment names)
- Recovery into the production Microsoft Exchange server into the original mailbox or alternate mailbox and folder
- Recovery into a .PST file

Microsoft SQL protection

- Snapshot restore of a full database backup
- File copy restore of a full database from a mounted snapshot image to an alternate database name or an alternate location

IBM DB2 protection

- Snapshot backup and restore of a full database, including and excluding log files
- Backup and restore of individual partitions for multi-partition IBM DB2
- Support of databases that are mirrored (between sites) using logical volume manager (LVM) mirroring technology

Oracle protection

- Snapshot backup and restore of a full database
- Support of databases that are mirrored (between sites) using LVM mirroring technology
- Support for Oracle Automated Storage Management (ASM) configurations and failure groups

SAP protection

- Snapshot backup and restore of a full SAP database running on IBM DB2 or Oracle
- Support of databases that are mirrored (between sites) using LVM mirroring technology

Simplified deployment of snapshot capabilities

Tivoli Storage FlashCopy Manager V2.1 includes all wizards to install, configure, and execute application data snapshot protection. In addition, Tivoli Storage FlashCopy Manager V2.1 can check to help ensure that all of the needed prerequisite software is installed and configured.

Integration with IBM System Storage hardware snapshot technology

Tivoli Storage FlashCopy Manager V2.1 utilizes the incremental FlashCopy backup capabilities of IBM System Storage DS8000 and IBM SAN Volume Controller (SVC) and exploits near instant restore with space efficient (SE) target volumes on the SAN Volume Controller (V5.1). When used with IBM XIV Storage System, Tivoli Storage FlashCopy Manager V2.1 utilizes XIV Storage System's highly efficient, auto provisioned snapshots. In addition, Tivoli Storage FlashCopy Manager V2.1

integrates with IBM System Storage DS3000, DS4000, and DS5000 via the Microsoft Volume Shadow Copy Services (VSS) interface.

Optional Tivoli Storage Manager integration

The optional integration with Tivoli Storage Manager allows Tivoli Storage FlashCopy Manager V2.1 users to take advantage of the robust data protection and data reduction capabilities (such as data deduplication) of Tivoli Storage Manager, such as:

- Enhanced data protection scalability with a relational database, based on IBM DB2 technology, designed to store many more objects and help manage more data.
- Near real-time monitoring and operational reporting capabilities.
- Built-in data deduplication that helps eliminate redundant data. This can enable significantly more backup data to be stored on disk.
- Centralized backup and archive of the data stored on the networked computers throughout an organization.
- Automated, progressive incremental backup-restore and archive-retrieve of the data.
- Automated, policy-based disaster preparation, planning, and recovery.

Changes to Tivoli Storage Manager and IBM Tivoli Storage Manager Extended Edition licensing

When Tivoli Storage Manager or Tivoli Storage Manager Extended Edition are used in conjunction with Tivoli Storage FlashCopy Manager, changes apply to the licensing requirements for Tivoli Storage Manager and Tivoli Storage Manager Extended Edition. For information on these changes, refer to the **Pricing example** subsection of the [IBMTivoli Enhanced Value-Based Pricing](#) section.

Refer to the Tivoli Storage FlashCopy Manager License Information document for applicable terms.

Entitlement information

If you have the current offering listed in the table below, you are entitled to IBM Tivoli Storage FlashCopy Manager V2.1. You can move your Subscription and Support entitlements based on the current Subscription and Support pricing of the replacement offering. You must be current on Software Subscription and Support (also referred to as Software Maintenance) to be eligible for move of Subscription and Support entitlements. If you are not current on Software Subscription and Support, you will have to pay a get-current or Software Subscription and Support reinstatement fee.

For more information on move of Subscription and Support entitlements, contact your IBM representative.

Existing entitlement			Replacement entitlement		
License PID	S&S PID	Program description	License PID	S&S PID	Program description
5608-CSS		IBM Tivoli Storage Manager for Copy Services v5.5	5724-X94		IBM Tivoli Storage FlashCopy Manager V2.1
5608-CSS	5608-CS1 5608-CS2 5608-CS3 5608-CS4 5608-CS5	IBM Tivoli Storage Manager for Copy Services v5	5608-AC6	5608-R11 5608-R12 5608-R13 5608-R14 5608-R15	IBM Tivoli Storage FlashCopy Manager V2.1
5608-E11		IBM Tivoli Storage Manager for	5724-X94		IBM Tivoli Storage FlashCopy

		Copy Services V6.1			Manager V2.1
5608-ACS		IBM Tivoli Storage Manager for Advanced Copy Services V5.5	5724-X94		IBM Tivoli Storage FlashCopy Manager V2.1
5608-ACS	5608-AC1	IBM Tivoli	5608-AC6	5608-R11	IBM Tivoli
	5608-AC2	Storage		5608-R12	Storage
	5608-AC3	Manager for		5608-R13	FlashCopy
	5608-AC4	Advanced Copy		5608-R14	Manager V2.1
	5608-AC5	Services		5608-R15	
		V5			
5608-E10		IBM Tivoli	5724-X94		IBM Tivoli
		Storage			Storage
		Manager for			FlashCopy
		Advanced Copy			Manager V2.1
		Services			
		V6.1			

Section 508 of the U.S. Rehabilitation Act

The product in this announcement is capable, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Product positioning

IBM Tivoli Storage FlashCopy Manager V2.1 is a new offering in the IBM Tivoli Storage product family. It complements other offerings, such as IBM Tivoli Storage Manager FastBack, by providing you with capabilities depending on your specific application protection needs. Depending on infrastructure and application protection environment, Tivoli Storage FlashCopy Manager or Tivoli Storage Manager FastBack may be the preferred solution.

The following are suggested guidelines for different environments.

Use Tivoli Storage FlashCopy Manager when:

- Application data snapshot capability is required for the IBM AIX platform.
- You have IBM System Storage with IBM FlashCopy and want to help protect Microsoft Exchange data and Microsoft SQL data on the Microsoft Windows platform with hardware-based snapshots.
- You have IBM System Storage with IBM FlashCopy and require the capability to have near instant data restore from a local snapshot. Tivoli Storage FlashCopy Manager is a logical add-on to IBM FlashCopy because it exploits the hardware FlashCopy capability to help protect the applications.

Use Tivoli Storage Manager FastBack when:

- You have very stringent recovery point objectives (RPO) to achieve that require block-level Continuous Data Protection (CDP) capabilities.
- You require the ability to access data immediately while restores are done in the background (for example, Tivoli Storage Manager FastBack instant restore).
- You need to help protect any Windows-based application.

Reference information

For products being replaced by Tivoli Storage FlashCopy Manager V2.1, refer to Withdrawal Announcement [909-203](#), dated October 20, 2009.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=209-297>

Program number

Program number	VR	Program name
5724-X94	2.1	IBM Tivoli Storage FlashCopy Manager (for Passport Advantage)
5608-AC6	2.1	IBM Tivoli Storage FlashCopy Manager

Product identification number

Program PID number	SW Subscription and Support 1 Year PID registration number	SW Subscription and Support 1 Year After License PID number
5608-AC6	5608-R11	5608-R12
	SW Subscription and Support 2 Year PID registration number	
	5608-R16	
	SW Subscription and Support 3 Year PID registration number	SW Subscription and Support 3 Year Renewal PID number
	5608-R13	5608-R14
	SW Subscription and Support 3 Year After License PID number	
	5608-R15	
	SW Subscription and Support 4 Year PID registration number	
	5608-R17	
	SW Subscription and Support 5 Year PID registration number	
	5608-R18	

Education support

Comprehensive education for IBM Tivoli products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available,

including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit

<http://www-306.ibm.com/software/tivoli/education/>

Offering Information

Product information is available via the Offering Information Web site

<http://www.ibm.com/common/ssi>

Also, visit the Passport Advantage® Web site

<http://www.ibm.com/software/passportadvantage>

Publications

The following hardcopy publication is shipped with the basic machine-readable material:

IBM Tivoli Storage FlashCopy Manager V2.1 Quick Start Guide

The publications listed below will be available in English and can be downloaded from the following Web site on the general availability date. Translated copies in selected languages will be available for download within 60 days of the general availability date.

<http://publib.boulder.ibm.com/infocenter/tsminfo/v6/index.jsp>

Title	Order number
IBM Tivoli Storage FlashCopy Manager V2.1 for AIX Installation and User's Guide	SC27-2503
IBM Tivoli Storage FlashCopy Manager V2.1 for Windows Installation and User's Guide	SC27-2504
IBM Tivoli Storage FlashCopy Manager V2.1 Messages	SC27-2505

The IBM Publications Center

<http://www.ibm.com/shop/publications/order>

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge.

Technical information

Specified operating environment

Hardware and software requirements

Hardware and software requirements for Tivoli Storage FlashCopy Manager V2.1 are available at the following Web site

<http://www.ibm.com/support/docview.wss?uid=swg21395564>

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement

letter. Documentation and other program content may be supplied only in the English language.

Planning information

Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express. Product upgrades and technical support are provided by the Software Subscription and Support (Software Maintenance) offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software, and technical support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with each program license acquired through Passport Advantage and Passport Advantage Express. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option, if available.

Packaging

Tivoli Storage FlashCopy Manager V2.1 is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document
- DVD media
- Publications (refer to the [Publications](#) section)

This program, when downloaded from a Web site, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

Tivoli Storage FlashCopy Manager V2.1 uses the security and auditability features of the operating system software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

<http://www.ibm.com/software/sw-services/>

IBM Tivoli Enhanced Value-Based Pricing

IBM Tivoli software products are priced using IBM Tivoli's Enhanced Value-Based Pricing. The Enhanced Value-Based Pricing system is based upon the IBM Tivoli Environment-Managed Licensing Model, which uses a managed-environment

approach -- whereby price is determined by what is managed rather than the number and type of product components installed.

For example, all servers monitored with IBM Tivoli's monitoring product (IBM Tivoli Monitoring) require entitlements sufficient for those servers. Other Tivoli products may manage clients, client devices, agents, network nodes, users, or other items, and are licensed and priced accordingly.

Unlike typical systems management licensing models that require entitlements of specific software components to specific systems, the IBM Tivoli Environment-Managed Licensing Model provides the customer flexibility to deploy its IBM Tivoli software products within its environment in a manner that can address and respond to the customer's evolving architecture. That is, as the architecture of a customer's environment changes, the customer's implementation of IBM Tivoli software can be altered, as needed, without affecting the customer's license requirements (as long as the customer does not exceed its entitlements to the software).

Under Enhanced Value-Based Pricing, licensing and pricing of server-oriented applications are determined based upon the server's use in the customer's environment. Typically, such applications are licensed and priced in a manner that corresponds to each installed and activated processor of the server managed by the IBM Tivoli application to help correlate price to value while offering a simple solution.

Where a server is physically partitioned, this approach is modified. This partitioning technique is the approach used with systems that have either multiple cards or multiple frames, each of which can be configured independently. For servers capable of physical partitioning (for example, IBM System p® Scalable POWERparallel Systems® servers, Sun Ultra servers, and HP Superdome servers), an entitlement is required for each processor in the physical partition being managed by the Tivoli application. For example, assume that a server has 24 processors installed in aggregate. If this server is not partitioned, entitlements are required for all 24 processors. If, however, it is physically partitioned into three partitions, each containing eight processors, and Tivoli products were managing only one of the three partitions, then entitlements would be required for the eight processors on the physical partition managed by the IBM Tivoli application.

For servers with virtual or logical partitions, entitlements are required for all installed and activated processors on the server. For each IBM Tivoli application managing a clustered environment, licensing is based on the cumulative number of installed and activated processors on each server in the cluster. Where the cluster includes physically partitioned servers, the considerations described above concerning physically partitioned servers apply as well.

Enhanced Value-Based Pricing recognizes the convergence of RISC and UNIX®, and Microsoft Windows and Intel® technologies, in order to simplify your licensing requirements, and to provide a smoother, more scalable model. Pricing and licensing does not differentiate between non-System z server platforms or operating systems. For some products, this platform neutrality extends to System z® and other host servers as well.

IBM Tivoli Enhanced Value-Based Pricing terminology definitions

Client device or client

A client device is a computer system that requires the execution of a set of commands, procedures, or applications from another computer system that is typically referred to as a server. Multiple client devices may share access to a common server. A client device generally has some processing capability or is programmable to allow a user to do work. Examples include, but are not limited to, notebook computers, desktop computers, desk side computers, technical workstations, appliances, automated teller machines, point-of-sale terminals, tills and cash registers, and kiosks.

Authorized user

An authorized user is one and only one individual (named or unnamed) within or outside your enterprise. A Proof of Entitlement (PoE) must be obtained for each individual user accessing the program in any manner. A program licensed under an authorized user PoE may be installed on a single computer or server, and accessed by multiple users, provided that a PoE has been obtained for each individual user accessing the program either directly or indirectly (via a multiplexing program, device, or application server) through any means on behalf of the user.

Note that authorized users have unique specific identity and IDs cannot be shared. An ID can establish one or more connections and count as a single authorized user. Specific information to security products:

Enterprise

An enterprise is a person or single entity and those subsidiaries with more than 50 percent ownership.

Server

A server is a computer system that executes requested procedures, commands, or applications to one or more user or client devices over a network. A PoE must be obtained for each server on which the program or a component of the program is run or for each server managed by the program. Where blade technology is employed, each blade is considered a separate server.

Standby or backup systems

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm and hot. In cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire other license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if running at another enterprise's location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes.

Cold: A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.

Warm: A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

Hot: A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data or other resources (for example, active linking with another machine, program, database or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files, or transactions, maintaining a heartbeat, active linking with another machine, program, database, or other resource), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

Terabyte (T/TB)

1 TB of managed storage = 2 to the power of 40 bytes = 1,099,511,627,776 bytes, trillion bytes.

Product and licensing Web sites

A complete list of IBM Tivoli products is available at

<http://www.ibm.com/software/tivoli>

IBM Tivoli product licensing documents are available at

<http://www.ibm.com/software/tivoli/products/licensing.html>

Passport Advantage

Through the Passport Advantage Agreement, you may receive discounted pricing based on their total volume of eligible products, across all IBM brands, acquired worldwide. The volume is measured by determining the total Passport Advantage points value of the applicable acquisitions. Passport Advantage points are only used for calculating the Entitled Passport Advantage discount.

To determine the required IBM Tivoli product configuration under Passport Advantage, the IBM Tivoli Enhanced Value-Based Pricing Model applies. The customer's environment is evaluated on a per-product basis.

Use the following two-step process to determine the total Passport Advantage points value:

1. Analyze your environment to determine the number of charge units for a product. The quantity of each product's part numbers to be ordered is determined by that analysis.
2. Order the Passport Advantage part numbers. A Passport Advantage point value, which is the same worldwide for a specific part number regardless of where the order is placed, is assigned to each IBM Tivoli product part number. The Passport Advantage point value for the applicable part number, multiplied by the quantity for that part number, will determine the Passport Advantage points for that IBM Tivoli product part number. The sum of these Passport Advantage points determines the Passport Advantage point value of the applicable IBM Tivoli product authorizations which then may be aggregated with the point value of other applicable Passport Advantage product acquisitions to determine the total Passport Advantage points value.

The discounted pricing available through Passport Advantage is expressed in the form of Suggested Volume Prices (SVPs), which vary depending on the SVP level. Each SVP level is assigned a minimum total Passport Advantage point value, which must be achieved, in order to qualify for that SVP level.

Media packs and documentation packs do not carry Passport Advantage points and are not eligible for SVP discounting.

For additional information on Passport Advantage, refer to the following

<http://www.ibm.com/software/passportadvantage>

The following Passport Advantage part number categories may be orderable:

- License and Software Subscription and Support 12 months - This is the product authorization with Software Subscription and Support to the first anniversary date.
- Annual Software Subscription and Support Renewal - This is the Software Subscription and Support renewal for one anniversary that applies when a customer renews their existing coverage period prior to the anniversary date at which it expires.

- Software Subscription and Support Reinstatement 12 months - This is for customers who have allowed their Software Subscription and Support to expire, and later wish to reinstate their Software Subscription and Support.
- Media packs - These are the physical media, such as CD-ROMs, that deliver the product's code.
- Documentation packs - These contain printed documentation such as the User's Guide and Release Notes.

Pricing example

The following example is provided to illustrate your licensing requirements.

Tivoli Storage FlashCopy Manager V2.1

Tivoli Storage FlashCopy Manager performs snapshots at the storage volume level. Entitlement for Tivoli Storage FlashCopy Manager is on a per terabyte (TB) basis. The storage capacity that requires entitlement is the total allocated volume size managed by Tivoli Storage FlashCopy Manager.

Scenario 1

The customer wants to have application data snapshot capability on a 100 TB pool of storage capacity on their Oracle database. Tivoli Storage FlashCopy Manager entitlements are required on the total allocated capacity managed by Tivoli Storage FlashCopy Manager. Therefore, the customer will require the following entitlements for Tivoli Storage FlashCopy Manager.

TB tiers	Number of TB entitlements required
1-12	12
13-32	20
33-64	32
65-100	36
101-250	0
251 +	0
Total entitlements required	100

Notes for Scenario 1

In environments where an application replicates production data to create a replica copy, Tivoli Storage FlashCopy Manager entitlement is only required on the capacity of the total allocated volume size managed by Tivoli Storage FlashCopy Manager for the source volumes of the production application data.

When Tivoli Storage Flash Copy Manager is used in a Tivoli Storage Manager environment and it sends data to a Tivoli Storage Manager server to be managed, you are required to have entitlement for Tivoli Storage Manager or Tivoli Storage Manager Extended Edition for the application server for which Tivoli Storage FlashCopy Manager manages data. In addition, you are required to have entitlement for the appropriate Tivoli Storage Manager application agent (the agent for Microsoft SQL and Oracle is IBM Tivoli Storage Manager for Databases, the agent for Microsoft Exchange is IBM Tivoli Storage Manager for Mail, and the agent for SAP is IBM Tivoli Storage Manager for Enterprise Resource Planning). The Tivoli Storage Manager agent for IBM DB2 is included with DB2, so an additional Tivoli Storage Manager application agent entitlement is not required in that case.

Scenario 2

If the customer in Scenario 1 sends that 100 TB of Oracle database data to a Tivoli Storage Manager server to be backed up, then the customer will need to entitle the server that is running the Oracle database for Tivoli Storage Manager for Databases,

which also requires entitlement for Tivoli Storage Manager or Tivoli Storage Manager Extended Edition. The Tivoli Storage Manager server needs to be entitled with either Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.

For Scenario 2, the following entitlements are required in addition to the requirements from Scenario 1. In this example, the Oracle database server and the Tivoli Storage Manager server are both dual quad core servers, with a total of eight processor cores on each server.

Tivoli Storage Manager environment	Processor core entitlements required
Tivoli Storage Manager for Databases	8
Tivoli Storage Manager or Tivoli Storage Manager Extended Edition	16
Total processor core entitlements required	24

Changes to Tivoli Storage Manager and Tivoli Storage Manager Extended Edition licensing

When Tivoli Storage Manager or Tivoli Storage Manager Extended Edition are used in conjunction with Tivoli Storage FlashCopy Manager, the following licensing requirement changes apply for Tivoli Storage Manager and Tivoli Storage Manager Extended Edition. For the purpose of offloaded proxy backup of Tivoli Storage FlashCopy Manager managed data to Tivoli Storage Manager or Tivoli Storage Manager Extended Edition, you are entitled to install on a secondary machine at no additional charge:

- A second copy of Tivoli Storage FlashCopy Manager.
- A second copy of Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.
- A second copy of the Tivoli Storage Manager application agent (the agent for Microsoft SQL and Oracle is Tivoli Storage Manager for Databases, the agent for Microsoft Exchange is Tivoli Storage Manager for Mail, and the agent for SAP is Tivoli Storage Manager for Enterprise Resource Planning). The secondary machine is intended for offloaded data backup to Tivoli Storage Manager or Tivoli Storage Manager Extended Edition.

Refer to the Tivoli Storage FlashCopy Manager License Information document for applicable terms.

Ordering information

This product is only available via Passport Advantage. It is not available as shrinkwrap.

Product group: Tivoli Storage Management

Product category: Tivoli Storage FlashCopy Manager

Product identifier description	PID number
IBM Tivoli Storage FlashCopy Manager (for Passport Advantage)	5724-X94
IBM Tivoli Storage FlashCopy Manager	5608-AC6

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

Media pack description and entitled maintenance offering description	Part number
Tivoli Storage FlashCopy Mgr 2.1 DVD MediaPack,	BJ0TLML

Current licensees

New licensees

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

Basic license

Ordering information for Passport Advantage

Passport Advantage allows you to have a common anniversary date for Software Subscription and Support (SW S&S) renewals, which can simplify management and budgeting for eligible new versions and releases (and related technical support) for your covered products. The anniversary date, established at the start of your Passport Advantage Agreement, will remain unchanged while your Passport Advantage Agreement remains in effect. New software purchases will initially include twelve full months of Software Subscription and Support (also referred to as Software Maintenance). Software Subscription and Support in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date. Thereafter, all Software Subscription and Support (Software Maintenance) will renew at the common anniversary date for twelve full months of Software Subscription and Support (Software Maintenance).

Refer to the IBM International Passport Advantage Agreement and to the *IBM Software Support Handbook* for specific terms relating to, and a more complete description of, technical support provided through Software Subscription and Support (Software Maintenance).

The quantity to be specified for the Passport Advantage part numbers in the following table is per terabyte. To order for Passport Advantage, specify the desired part number and quantity.

Description	Part number
IBM Tivoli Storage FlashCopy Manager	
Per Terabyte (1-12) License and SW S&S 12 Months	D0B5GLL
Per Terabyte (1-12) Annual SW S&S Renewal	E07TXLL
Per Terabyte (1-12) SW S&S Reinstatement 12 Months	D0B83LL
Per Terabyte (13-32) License and SW S&S 12 Months	D0B6YLL
Per Terabyte (13-32) Annual SW S&S Renewal	E07UBLL
Per Terabyte (13-32) SW S&S Reinstatement 12 Months	D0B84LL
Per Terabyte (33-64) License and SW S&S 12 Months	D0B85LL
Per Terabyte (33-64) Annual SW S&S Renewal	E07UTLL
Per Terabyte (33-64) SW S&S Reinstatement 12 Months	D0B86LL
Per Terabyte (65-100) License and SW S&S 12 Months	D0B87LL
Per Terabyte (65-100) Annual SW S&S Renewal	E07UULL
Per Terabyte (65-100) SW S&S Reinstatement 12 Months	D0B88LL
Per Terabyte (101-250) License and SW S&S 12 Months	D0B8CLL

Per Terabyte (101-250)	
Annual SW S&S Renewal	E07UXLL
Per Terabyte (101-250)	
SW S&S Reinstatement 12 Months	D0B8DLL
Per Terabyte (251+)	
License and SW S&S 12 Months	D0B8ELL
Per Terabyte (251+)	
Annual SW S&S Renewal	E07UYLL
Per Terabyte (251+)	
SW S&S Reinstatement 12 Months	D0B8FLL

To order a media pack for Passport Advantage, specify the part number in the desired quantity from the following table:

Description	Part number
IBM Tivoli Storage FlashCopy Manager V2.1 DVD media pack - multilingual	BJ0TLML

Linux® on z ordering information for IBM Tivoli Storage Manager for Storage Area Networks and IBM Tivoli Storage Manager for Databases

Linux on z part numbers are now available for ordering in Passport Advantage for the following products:

Description	Part number
IBM Tivoli Storage Manager for Storage Area Networks 10 Processor Value Units:	
Linux on z - License and SW S&S 12 Months	D0BE7LL
Linux on z - Annual SW S&S Renewal	E07XCLL
Linux on z - SW S&S Reinstatement 12 Months	D0BE8LL
IBM Tivoli Storage Manager for Databases 10 Processor Value Units:	
Linux on z - License and SW S&S 12 Months	D0BTCLL
Linux on z - Annual SW S&S Renewal	E087QLL
Linux on z - SW S&S Reinstatement 12 Months	D0BTDLL

Ordering information for non-Passport Advantage

To order a basic license, specify the program number and the feature number of the desired distribution medium. Also, specify the one-time charge feature number in the quantity desired (maximum quantity of 250).

The quantity to be specified for the feature numbers in the following tables is per terabyte.

Product number	Product name	Feature number
5608-AC6	IBM Tivoli Storage FlashCopy Manager V2.1	
Per Terabyte (1-12) with 1 Year SW S&S		0001
Per Terabyte (13-32) with 1 Year SW S&S		0002
Per Terabyte (33-64) with 1 Year SW S&S		0003
Per Terabyte (65-100) with 1 Year SW S&S		0004
Per Terabyte (101-250) with 1 Year SW S&S		0005
Per Terabyte (251+) with 1 Year SW S&S		0006
Per 250 Terabyte (251+) with 1 Year SW S&S		0007

This software license includes Software Subscription and Support, also referred to as Software Maintenance. Extending coverage from two to five years from date of acquisition may be elected. Renewals can be ordered for one year and three years. Order the program number, feature number, and quantity to extend coverage for your software licenses. If Software Subscription and Support has expired, specify the after license feature number.

IBM Tivoli Storage FlashCopy Manager

SW S&S PID 1 Year: 5608-R11

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S No Charge Registration	0001
Per Terabyte (13-32)	
-- SW S&S No Charge Registration	0003
Per Terabyte (33-64)	
-- SW S&S No Charge Registration	0005
Per Terabyte (65-100)	
-- SW S&S No Charge Registration	0007
Per Terabyte (101-250)	
-- SW S&S No Charge Registration	0009
Per Terabyte (251+)	
-- SW S&S No Charge Registration	0011
Per 250 Terabyte (251+)	
-- SW S&S No Charge Registration	0012
Per Terabyte (1-12)	
-- SW S&S 1 Year Renewal	0002
Per Terabyte (13-32)	
-- SW S&S 1 Year Renewal	0004
Per Terabyte (33-64)	
-- SW S&S 1 Year Renewal	0006
Per Terabyte (65-100)	
-- SW S&S 1 Year Renewal	0008
Per Terabyte (101-250)	
-- SW S&S 1 Year Renewal	0010
Per Terabyte (251+)	
-- SW S&S 1 Year Renewal	0013
Per 250 Terabyte (251+)	
-- SW S&S 1 Year Renewal	0014

SW S&S PID 1 Year: 5608-R12

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 1 Year After License	0001
Per Terabyte (13-32)	
-- SW S&S 1 Year After License	0002
Per Terabyte (33-64)	
-- SW S&S 1 Year After License	0003
Per Terabyte (65-100)	
-- SW S&S 1 Year After License	0004
Per Terabyte (101-250)	
-- SW S&S 1 Year After License	0005
Per Terabyte (251+)	
-- SW S&S 1 Year After License	0006
Per 250 Terabyte (251+)	
-- SW S&S 1 Year After License	0007

SW S&S PID 2 Year: 5608-R16

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 2 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 2 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 2 Year Registration	0003

Per Terabyte (65-100)	
-- SW S&S 2 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 2 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 2 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 2 Year Registration	0007

SW S&S PID 3 Year: 5608-R13

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 3 Year Registration	0001
Per Terabyte (13-32)	
-- SW S&S 3 Year Registration	0002
Per Terabyte (33-64)	
-- SW S&S 3 Year Registration	0003
Per Terabyte (65-100)	
-- SW S&S 3 Year Registration	0004
Per Terabyte (101-250)	
-- SW S&S 3 Year Registration	0005
Per Terabyte (251+)	
-- SW S&S 3 Year Registration	0006
Per 250 Terabyte (251+)	
-- SW S&S 3 Year Registration	0007

SW S&S PID 3 Year: 5608-R14

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 3 Year Renewal	0001
Per Terabyte (13-32)	
-- SW S&S 3 Year Renewal	0002
Per Terabyte (33-64)	
-- SW S&S 3 Year Renewal	0003
Per Terabyte (65-100)	
-- SW S&S 3 Year Renewal	0004
Per Terabyte (101-250)	
-- SW S&S 3 Year Renewal	0005
Per Terabyte (251+)	
-- SW S&S 3 Year Renewal	0006
Per 250 Terabyte (251+)	
-- SW S&S 3 Year Renewal	0007

SW S&S PID 3 Year: 5608-R15

Description	Feature number
Per Terabyte (1-12)	
-- SW S&S 3 Year After License	0001
Per Terabyte (13-32)	
-- SW S&S 3 Year After License	0002
Per Terabyte (33-64)	
-- SW S&S 3 Year After License	0003
Per Terabyte (65-100)	
-- SW S&S 3 Year After License	0004
Per Terabyte (101-250)	
-- SW S&S 3 Year After License	0005
Per Terabyte (251+)	
-- SW S&S 3 Year After License	0006
Per 250 Terabyte (251+)	
-- SW S&S 3 Year After License	0007

SW S&S PID 4 Year: 5608-R17

Description	Feature number
Per Terabyte (1-12) -- SW S&S 4 Year Registration	0001
Per Terabyte (13-32) -- SW S&S 4 Year Registration	0002
Per Terabyte (33-64) -- SW S&S 4 Year Registration	0003
Per Terabyte (65-100) -- SW S&S 4 Year Registration	0004
Per Terabyte (101-250) -- SW S&S 4 Year Registration	0005
Per Terabyte (251+) -- SW S&S 4 Year Registration	0006
Per 250 Terabyte (251+) -- SW S&S 4 Year Registration	0007

SW S&S PID 5 Year: 5608-R18

Description	Feature number
Per Terabyte (1-12) -- SW S&S 5 Year Registration	0001
Per Terabyte (13-32) -- SW S&S 5 Year Registration	0002
Per Terabyte (33-64) -- SW S&S 5 Year Registration	0003
Per Terabyte (65-100) -- SW S&S 5 Year Registration	0004
Per Terabyte (101-250) -- SW S&S 5 Year Registration	0005
Per Terabyte (251+) -- SW S&S 5 Year Registration	0006
Per 250 Terabyte (251+) -- SW S&S 5 Year Registration	0007

Subscription and Support

To receive voice technical support via telephone and future releases and versions at no additional charge, Subscription and Support must be ordered. The capacity of Subscription and Support (for example, number of servers or terabytes) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program number (PID) referenced above and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

Basic machine-readable material

The distribution medium feature number in the following table applies to program number 5608-AC6. To order, select the distribution medium feature number.

Feature number	Language	Distribution medium
5809	Multilingual	DVD

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

This product is only available via Passport Advantage. It is not available as shrinkwrap.

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This software license includes Software Subscription and Support (also referred to as Software Maintenance).

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The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) agreement applies for subscription and support (also referred to as Software Maintenance) and does not require customer signatures.

This program is licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. This program has a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

License Information form number

GI11-9331

The program's License Information will be available for review on the IBM Software License Agreement Web site

<http://www.ibm.com/software/sla/sladb.nsf>

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

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Technical support of a program product will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect. This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates, releases, and versions of the program. You will be notified, via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Authorization for use on home/portable computer

You may not copy and use this program on another computer without paying additional license fees.

Other terms**Volume orders (IVO)**

No

IBM International Passport Advantage Agreement**Passport Advantage applies**

Yes, and through the Passport Advantage Web site at

<http://www.ibm.com/software/passportadvantage>

Usage restriction

Yes. Usage is limited to the quantity of terabytes licensed.

For additional information, refer to the License Information document that is available on the IBM Software License Agreement Web site

<http://www.ibm.com/software/sla/sladb.nsf>

Software Subscription and Support (Software Maintenance) applies:

Yes. Software Subscription and Support (also referred to as Software Maintenance), is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this announcement is provided by the Software Subscription and Support (Software Maintenance) offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice or electronic access into the IBM support organizations.

IBM includes one year of Software Subscription and Support (Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option.

While your Software Subscription and Support (Software Maintenance) is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. For additional details, consult your IBM Software Support Handbook at

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Software Subscription and Support (Software Maintenance) does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under this agreement.

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All distributed software licenses acquired outside of Passport Advantage include Software Subscription and Support (Software Maintenance) for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage, for a total of three years from date of acquisition, may be elected. For additional information, refer to Changes to Distributed Software Products Model for Products Outside Passport Advantage Software Announcement [201-201](#), dated July 10, 2001.

Variable charges apply

No

Educational allowance available

Yes. A 15% education allowance applies to qualified education institution customers.

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IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled

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Prices

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If you are an IBM Business Partner -- Distributor for Workstation Software acquiring products from IBM, you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBM ID and password are required.

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In the Electronic tools category, select the option for Purchase/upgrade tools.

Passport Advantage

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